MINI PROJECT

REPORT ON

DIGITAL FACILITATOR DISTRIBUTOR

SUBMITTED BY

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Submitted To

Savitribai Phule Pune University

As a partial fulfilment for the award of the degree of

MASTER OF COMPUTER APPLICATION

Semester : 1

At

ASM'S

Institute of Business Management and

Research, Chinchwad, Pune – 19

(Affiliated to SPPU & Approved by AICTE)

Session: 2021

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DIGITAL FACILITATOR DISTRIBUTOR

INTRODUCTION:

The project titled Digital Facilitator Distributor its related to the library system its monitoring and controlling the transactions inside the library. The project is "Digital Facilitator Distributor" is developed in Java, which mainly focus on basic operations in a library like adding new member,new books and updating new information, searching books and members facility to borrow and return book.

"Digital Facilitator Distributor" is a window application written for a 32 bit or above operating systems, designed to help users maintains and organize library. Our software is easy to use. It features are familiar and well thought-out, an attractive user interface, combined with strong searching insertion and reporting capabilities. The report generation facility of library system helps to get a good idea of which are the books borrowed by the members, makes user possible to generate reports.

It has four main modules are:-

- ✓ Insertion to database module – User friendly input screen
- ✓ Extracting from database module- Attractive output screen
- ✓ Report generation Module- Borrwed by n return book list
- ✓ Search facility system- Search for books and members

1.1) EXISTING SYSTEM:

The existing system is majorly clerical process this is not computerized system. There are some drawbacks in existing system:

- More man power
- Time consuming
- Lack of security of data
- Issuing and receiving of the book is also complex.

- Early days Libraries are managed manually. It required lot of time to record or to retrieve the details. The employees who have to record the details must perform their job very carefully. Even a small mistake would create a lot of problems. Security of information is very less. Report generations of all the information is very tough task.
- Maintenance of Library catalogue and arrangement of the books to the catalogue is very complex task. In addition to its maintenance of member details, issue dates and return dates etc. manually is a complex task. ν
- All the operations must be performed in perfect manner for the maintenance of the library with out any degradation which may finally result in the failure of the entire system.

1.2) NEED FOR THE SYSTEM:

Now our system will overcome this all drawbacks. It will reduce efforts required to manage all records. All work can be done on just few clicks. The Only need is to fill given forms for retrieving required information. This system will provides facilities like add user , Update book records, delete records, search records by book id and member id. Its secure the data & data accuracy also it Reduce the workload of employee.

FEASIBILITY STUDY:

There are mainly three kind of feasibility study that are equally important for this software development:

1) Technical Feasibility:-
    - Technical feasibility plays an important role in feasibility study. The study reveals all the technical aspects & its corresponding results.

2) Economical feasibility:-
    - Economical feasibility is one of the most important aspects to be considered. This study reveals all the benefits & drawbacks in implementation of system. The total cost incurred for the development & implementation will be least as computer.

3) Operational Feasibility:-
    - Operational feasibility is the important part of feasibility study. We consider the capabilities of end user that how can easily handle the computer. In our projects as JAVA used which is GUI, due to which user can easily handle it.

1.3) SCOPE OF THE SYSTEM:

- This project is about to handle all the information of the customer and the book issued to them.
- Also, it manages the members work like which book is issued by which member to whom. The main purpose of the project is to integrate all the information related books, customers, employees and placed them into consistent manner so that the complex functions can be handled smoothly by any technical or non-technical persons.
- This application can be used in any library to automate the process of manually maintaining the records related to the subject of maintaining the book issues.

SYSTEM REQUIREMENTS:

NON FUNCTIONAL REQUIREMENTS:

- Product Requirements

EFFICIENCY REQUIREMENT

- When a library system will be implemented librarian and user will easily acess library as searching and book transaction will be very faster .

RELIABILITY REQUIREMENT

- The system should accurately performs member registration ,member validation , report generation, book transaction and search the book and members.

USABILITY REQUIREMENT

- The system is designed for a user friendly environment so that student and staff of library can perform the various tasks easily and in an effective way.

ORGANIZATIONAL REQUIREMENT

IMPLEMENTATION REQUIREMNTS

In implementing whole system it uses html in front end with java awt and swing.

scripting language which will be used for database connectivity and the backend ie the database part is developed using mysql.

FUNCTIONAL REQUIREMENTS:

NORMAL USER

USER LOGIN:-

Description of feature

This feature used by the user to login into system. They are required to enter user id and password before they are allowed to enter the system .The user id and password will be verified and if invalid id is there user is allowed to not enter the system.

Functional requirements

-user id is provided when they register

-The system must only allow user with valid id and password to enter the system

-The system performs authorization process which decides what user level can acess to.

REGISTER NEW USER:-

Description of feature

This feature can be performed by all users to register new user to create account.

Functional requirements

-System must be able to verify information

-System must be able to delete information if information is wrong

REGISTER NEW BOOK:-

Description of feature

This feature allows to add new books to the library

Functional requirements

- System must be able to verify information

- System must be able to enter number of copies into table.

- System must be able to not allow two books having same book id.

SEARCH BOOK:-

DESCRIPTION OF FEATURE

This feature is found in book maintenance part . we can search book based on book id and member id.

Functional requirements

- System must be able to search the database based on select search type .

- System must be able to filter book based on keyword enter.

- System must be able to show the filtered book in table view.

Functional requirements

-System should be able to add detailed information about events .

-System should be able to display information on notice board available in the homepage of site

1.4) Operating Environment- Hardware And Software:

SOFTWARE REQUIREMENTS

- Operating system- Windows 10 is used as the operating system as it is stable and supports more features and is more user friendly.
- Database MYSQL-MYSQL is used as database as it easy to maintain and retrieve records by simple queries which are in English language which are easy to understand and easy to write.

- Development tools and Programming language- HTML is used to write the whole code and AWT and Swing are used to develop window-based applications in Java. Awt is an abstract window toolkit that provides various component classes like Label, Button, TextField, etc., to show window components on the screen.

HARDWARE REQUIREMENTS

- Intel core i5 2nd generation is used as a processor because it is fast than other processors an provide reliable and stable and we can run our pc for longtime. By using this processor we can keep on developing our project without any worries.
- Ram 2gb & above is used as it will provide fast reading and writing capabilities and will in turn support in processing.

1.5) DETAIL DESCRIPTION OF TECHNOLOGY USED:

1. JAVA:

Java is a general-purpose, object-oriented programming language developed by Sun Microsystems of USA in 1991.Originally called Oak by James Gosling (one of the inventor of the language). Java was invented for the development of software for cunsumer electronic devices like TVs, tosters, etc. The main aim had to make java simple, portable and reliable. Java Authors: James , Arthur Van , and others. Java is a high-level, third generation programming language, like C, FORTRAN, Smalltalk, Perl, and many others. You can use Java to write computer applications that play games, store data or do any of the thousands of other things computer software can do. Compared to other programming languages, Java is most similar to C. However although Java shares much of C's syntax, it is not C. Knowing how to program in C or, better yet, C++, will certainly help you to learn Java more quickly, but you don't need to know C to learn Java. A Java compiler won't compile C code, and most large C programs need to be changed substantially before they can become Java programs. What's most special about Java in relation to other programming languages is that it lets you write special programs called applets ,web project etc. that can be downloaded from the Internet and played safely within a web browser. Java language is called as an Object-Oriented Programming language and before beginning for Java, we have to learn the concept of OOPs(Object-Oriented Programming).

2.AWT :

AWT stands for **Abstract Window Toolkit.** It is a platform-dependent API to develop GUI (Graphical User Interface) or window-based applications in Java. It was developed by heavily sun microsystems in 1995 . It is heavy-weight in use because it is generated by the system's host operating system. It contains a large number of classes and methods, which are used for creating and managing GUI.

3.SWING:

Swing is a lightweight Java graphical user interface (GUI) that is used to create various applications. Swing has platform-independent components. It enables the user to create buttons and scroll bars. Swing includes packages for creating desktop applications in Java. Swing components are written in Java language. It is a part of Java Foundation Classes(JFC).

4.HTML:

HTML or **Hyper Text Markup Language** is the main markuplanguage for creating web pages and other information that can be displayedin a web browser.HTML is written in the form of HTML elements consisting of tags enclosed in angle brackets (like<html>), within the web pagecontent. HTML tags most commonly come in pairs like <h1> and </h1>, although some tags represent empty elements and so are unpaired, for example <img>. The first tag in a pair is the start tag , and the second tag is the end tag (they are also called opening tags and closing tags). In between these tags web designers can add text, further tags, comments and other types of text-based content. The purpose of a web browser is to read HTML documents and compose them into visible or audible web pages. The browser does not display the HTML tags, but uses the tags to interpret the content of the page.HTML elements form the building blocks of all websites.HTML allows images and objects to be embedded and can be used to create interactive forms. It provides a means to create structured documents by denoting structural semantics for text such as headings, paragraphs, lists, links, quotes and other items. It can embed scripts written in languages such as JavaScript which affect the behaviour of HTML web pages.

5.MYSQL:

MySQL ("My S-Q-L", officially, but also called "My Sequel") is (as of July 2013) the world's second most widely used open-source relational database management system (RDBMS). It is named after co-founder Michael Widenius daughter, My. The SQL phrase stands for Structured Query Language. The MySQL development project has made its source code available under the terms of the GNU General Public License, as well as under a variety of proprietary agreements. MySQL was owned and sponsored by a single for-profit firm, the Swedish company MySQL AB, now owned by Oracle Corporation. MySQL is a popular choice of database for use in web applications, and is a central component of the widely used LAMP open source web application software stack (and other 'AMP' stacks). LAMP is an acronym for "Linux, Apache, MySQL, Perl/PHP/Python." Free-software-open source projects that require afull-featured database management system often use MySQL. For commercial use, several paid editions are available, and offer additional functionality. Applications which use MySQL databases include: TYPO3, MODx, Joomla, WordPress, phpBB, MyBB, Drupal and other software. MySQL is also used in many high-profile, large-scale websites, including Wikipedia, Google (though not for searches), Facebook, Twitter, Flickr, and YouTube.

PROPOSED SYSTEM

2.1) Proposed System:

The aim of proposed system is to develop a system of improved facilities. The proposed system can overcome all the limitations of the existing system.the system provides proper security and reduces the manual work.

- Security of data
- Ensure data accuracy
- Proper control of the higher officials.
- Minimize manual data entry.
- Minimum time needed for the various processing.
- Greater efficiency.
- Better service.
- User friendliness and interactive.
- Minimum time required
- Fast access to database

- Less error
- More storage capacity.
- Search facility

2.2) OBJECTIVES OF THE SYSTEM:

- The objectives of digital facilitator distributor to handle entire activity of library.
- The main objective of the Library Management System is to manage the details of Member, Issues, Books. It manages all the information about Address, Librarian, members. The project is totally built at administrative end and thus only the administrator is guaranteed the access.
- The software keeps track all the information about the books and complete details.
- The system contains database where all the information will be stored safely.

2.3) USER REQUIREMENTS:

Functional Requirement

On the other side, there are those that deal with all type of technical functioning of the system.

- **Login:**

He/she is to authenticate a user, that is to know whether he or she can get access to the system. At the time of login, the user will be required to enter their user id and password. If for any user these fields don't match, then the user will not be allowed to use the system. For this, the user id is stored at the time of registration.

This library management system must only allow a user with a valid id and password to become the beneficiary. After this authorization takes place, to know all are the levels a particular user can access to. Also, after finishing the work user must log out of the system to prevent the transaction from any intruder.

- **Adding New book in the library:**

This feature is used to add new books to the library by the authority. The system must enter and maintain the number of copies of each individual book. Also, the system must allocate unique IDs to individual books carefully.

- **Search operation:**

The system must provide the facility of searching books based on their unique identity, the name of the book, author name. There must be some filters available to search with keywords. Some table views of the searches must be available.

- **Issue and Return book:**

This is for issuing and returning books and also maintaining the issue and return status in the database timely. The system must be performing well with storing the issue data into the database. The updated number of books feature must be working fine. Before issuing any book, the system must firstly check for its availability, if it is available in stock or not.

Along with issuing the books, the return dates must be shared with the students and must be entered into the database also.

Non-Functional Requirement of Library Management System

- **Product Requirements**

These are those that specify some criteria that can be used to evaluate the performance of a system in some particular conditions.

- **Efficiency Requirement:**

Through this system, the members and the librarian gets a way to ease their work. Through this system, the member can search and get the book issued easily. Also, less time will be needed to spend by the librarian to handle this. Therefore, the throughout is faster processing of the library management system.

- **Reliability Requirement:**

The system does its work with more accuracy like user registration to the system, user validation, and authorization, book search, and issue operation return status, and updating the database by synchronizing between database and application.

- **Usability Requirement:**

The proposed library management system provides a user-friendly environment to the users so that the librarians, as well as the students, can utilize the system in an effective manner for ease of work.

- **Portability requirements:**

Portability in high-level computer programming is the usability of the same software in different environments. The pre-requirement for portability is the generalized abstraction between the application logic and system interfaces. When software with the same functionality is produced for several computing platforms, portability is the key issue for development cost reduction.

Transferring installed program files to another computer of basically the same architecture. Reinstalling a program from distribution files on another computer of basically the same architecture.

- **Organisational Requirements**

- **Delivery Requirement:**

There is always some time duration specified to develop a project. Similarly, this system is expected to be complete within 2 months of time. This launch will be used for improving the performance, as it will be evaluated by the users and then the problems that are occurring with the system will be solved.

- **Implementation requirements:**

Implementation is the realization of an application, or execution of a plan, idea, model, design, specification, standard, algorithm, or policy. an implementation is a realization of a technical specification or algorithm as a program, software component, or other computer system through programming and deployment. Many implementations may exist for a given specification or standard. In implementing whole system. it uses html in front end with java awt and swing. scripting language which will be used for database connectivity and the backend ie the database part is developed using mysql.

- **Standard requirements:**

  The project should be developed as per standard format specified by IEEE. Typical platforms include a computer architecture, operating system, programming languages and related user interface. The product should be developed as per client's standard requirements.

❖ **External Requirements**

- **Interoperability requirements:**

Interoperability is a property of a product or system, whose interfaces are completely understood, to work with other products or systems, present or future, without any restricted access or implementation. The IEEE Glossary defines interoperability as: the ability of two or more systems or components to exchange information and to use the information that has been exchanged.

- **Legislative requirements:**

In the proprietary software industry, an end-user license agreement or software license agreement is the contract between the licensor and purchaser, establishing the purchaser's right to use the software. The license may define ways under which the copy can be used. Software companies often make special agreements with large businesses and government entities that include support contracts and specially drafted warranties.

- **Privacy requirements:**

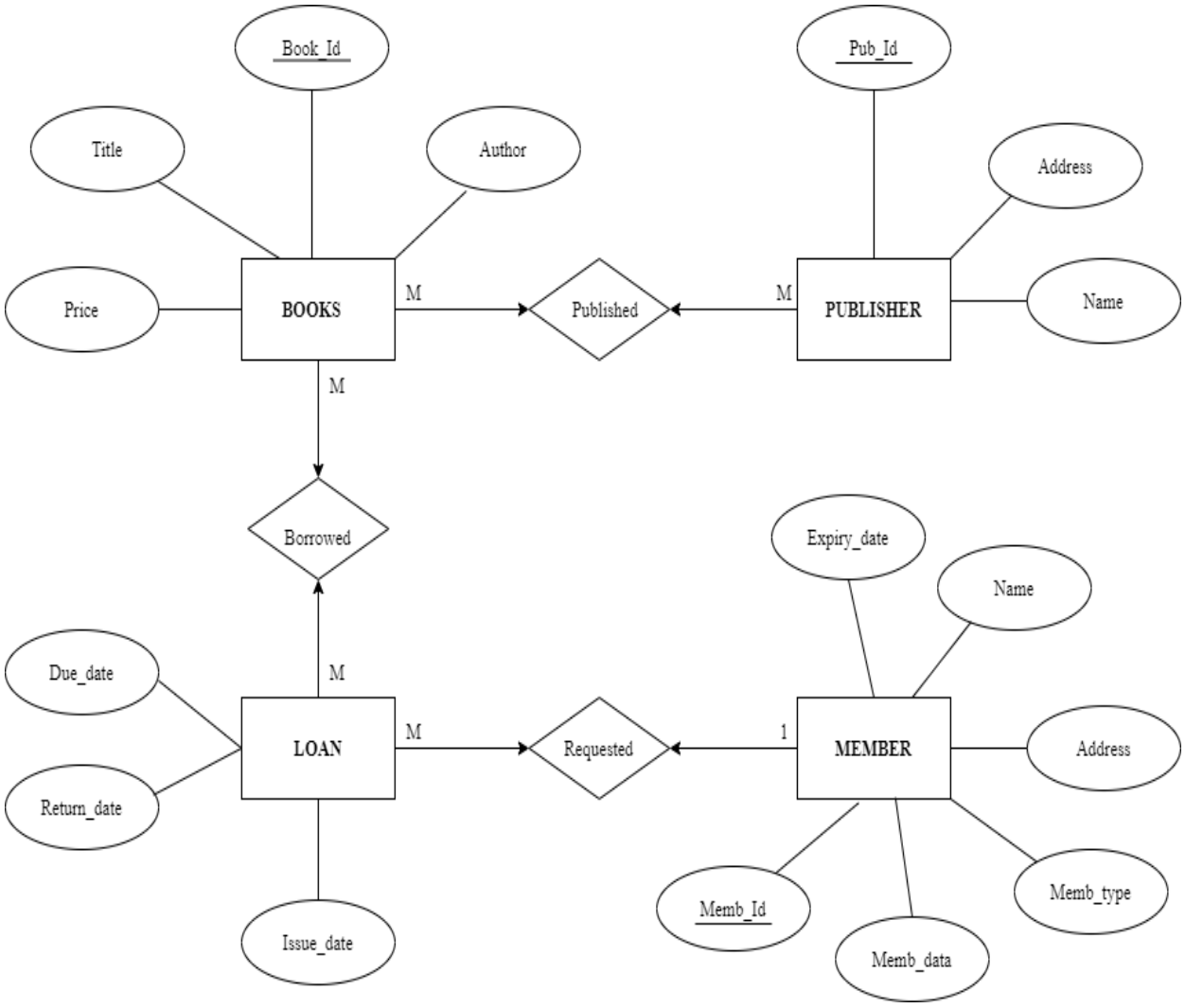
The term "privacy" means many things in different contexts. Different people, cultures, and nations have a wide variety of expectations about how much privacy a person is entitled to or what constitutes an invasion of privacy. Privacy is the ability of an individual or group to seclude themselves or information about themselves and thereby reveal themselves selectively. The boundaries and content of what is considered private differ among cultures and individuals, but share basic common themes. Privacy is sometimes related to anonymity, the wish to remain unnoticed or unidentified in the public realm.

- **Safety requirements:**

Safety can also be defined to be the control of recognized hazards to achieve an acceptable level of risk. Safety is the state of being "safe", the condition of being protected against physical, social, spiritual, financial, political, emotional, occupational, psychological, educational or other types or consequences of failure, damage, error, accidents, harm or any other event which could be considered non-desirable.

ANALYSIS AND DESIGN

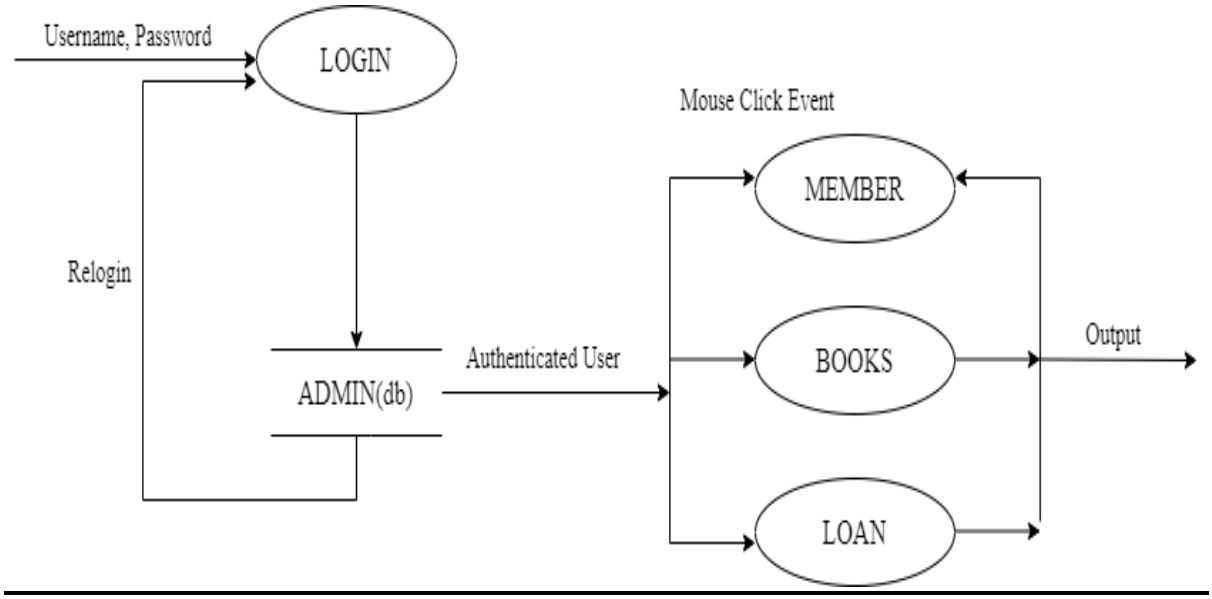
3.1) Entity Relationship Diagram



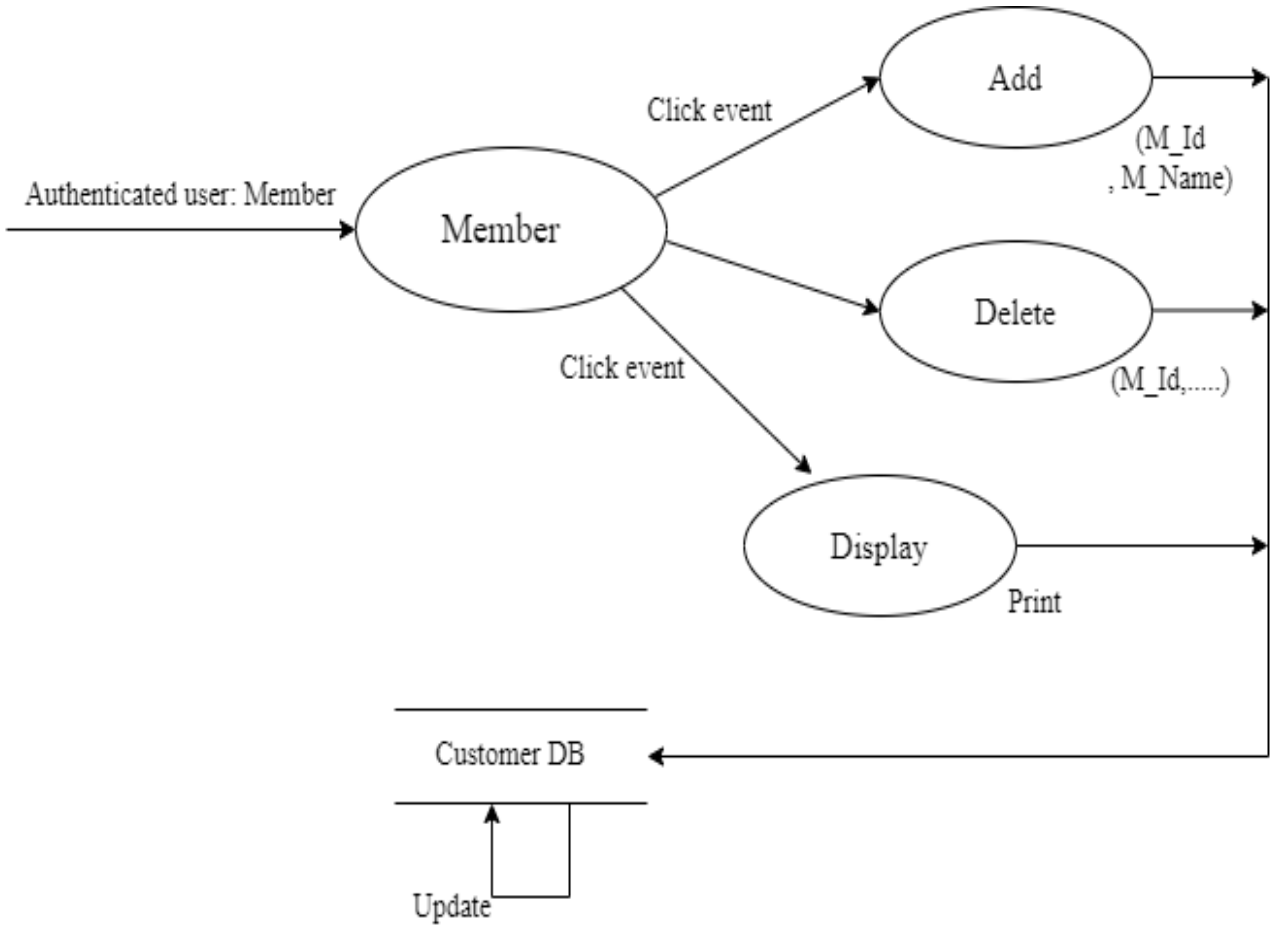
3.2) Data Flow Diagram

Zero Level DFD

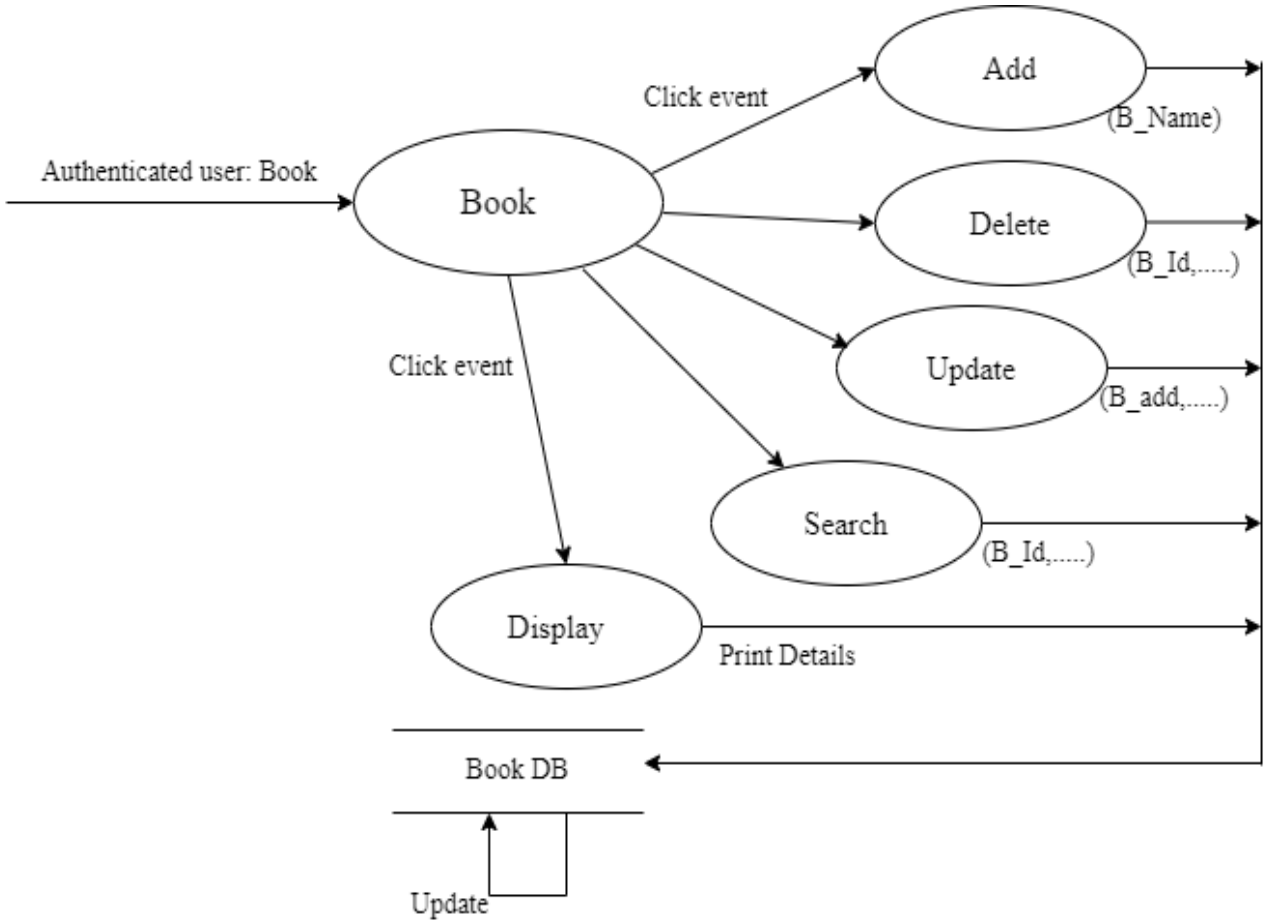
First Level DFD



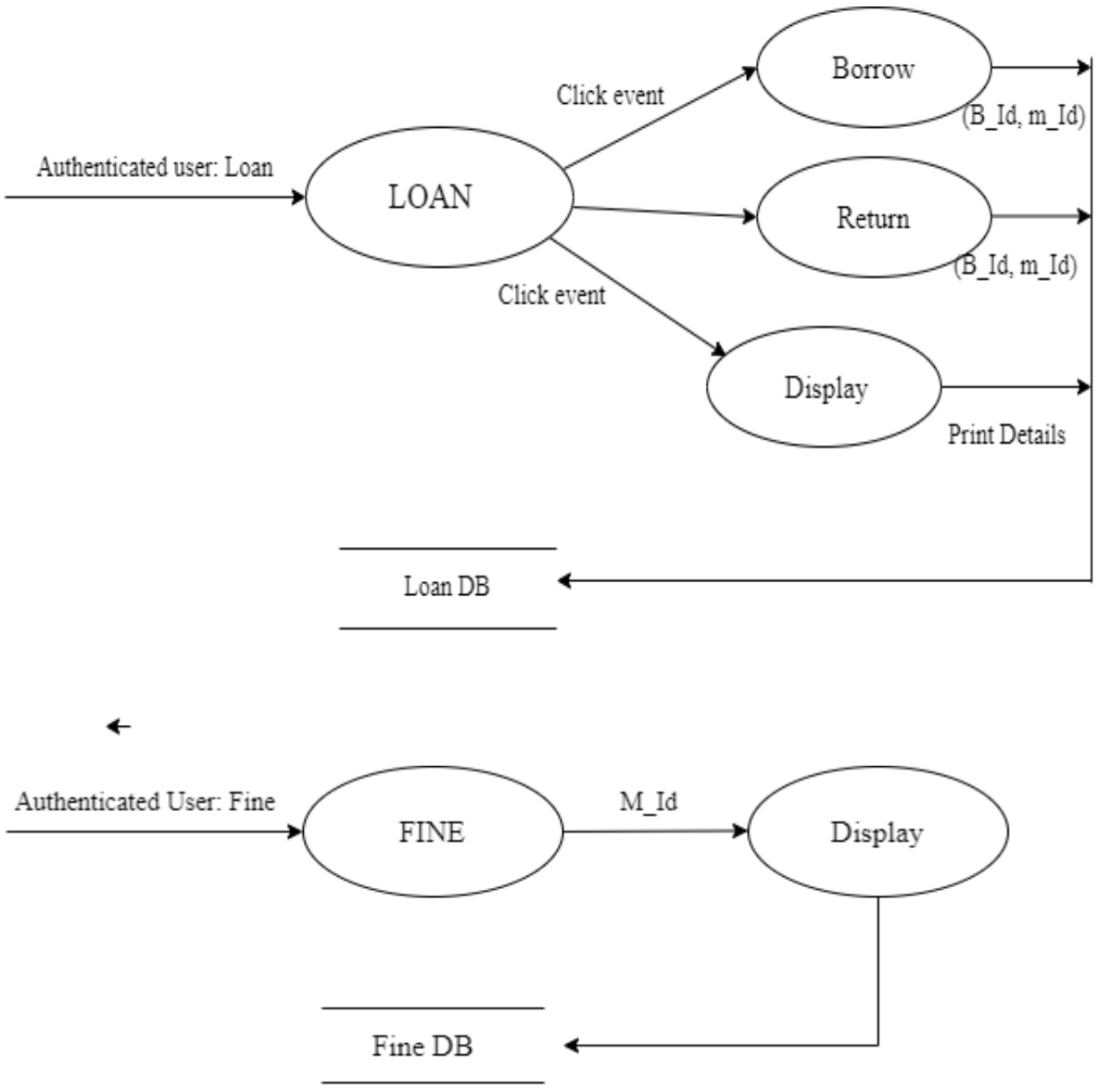
DFD Level 2(a)


Add
Click event
(M_Id
, M_Name)
Authenticated user: Member
Member
Delete
Click event
(M_Id,.....)
Display
Print
Customer DB
Update

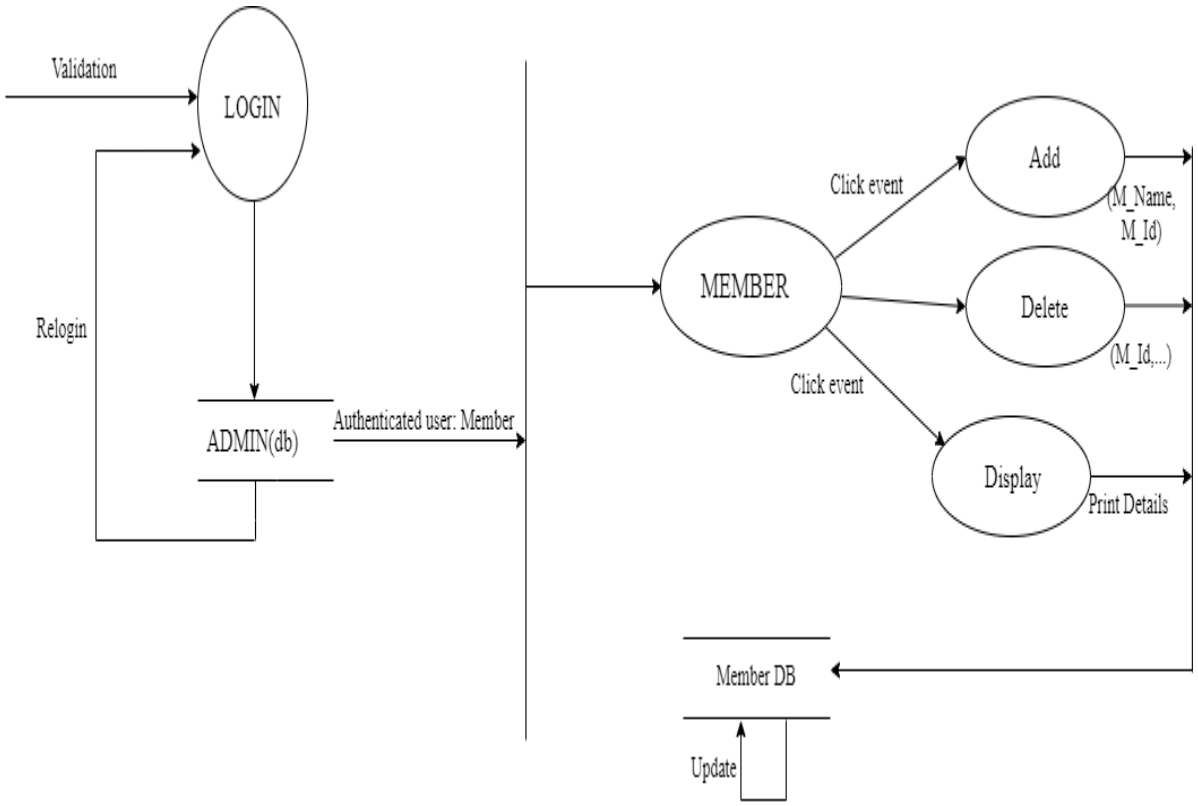
DFD Level 2(b)


Authenticated user: Book
Book
Click event
Add
(B_Name)
Delete
(B_Id,.....)
Update
(B_add,.....)
Search
(B_Id,.....)
Click event
Display
Print Details
Book DB
Update

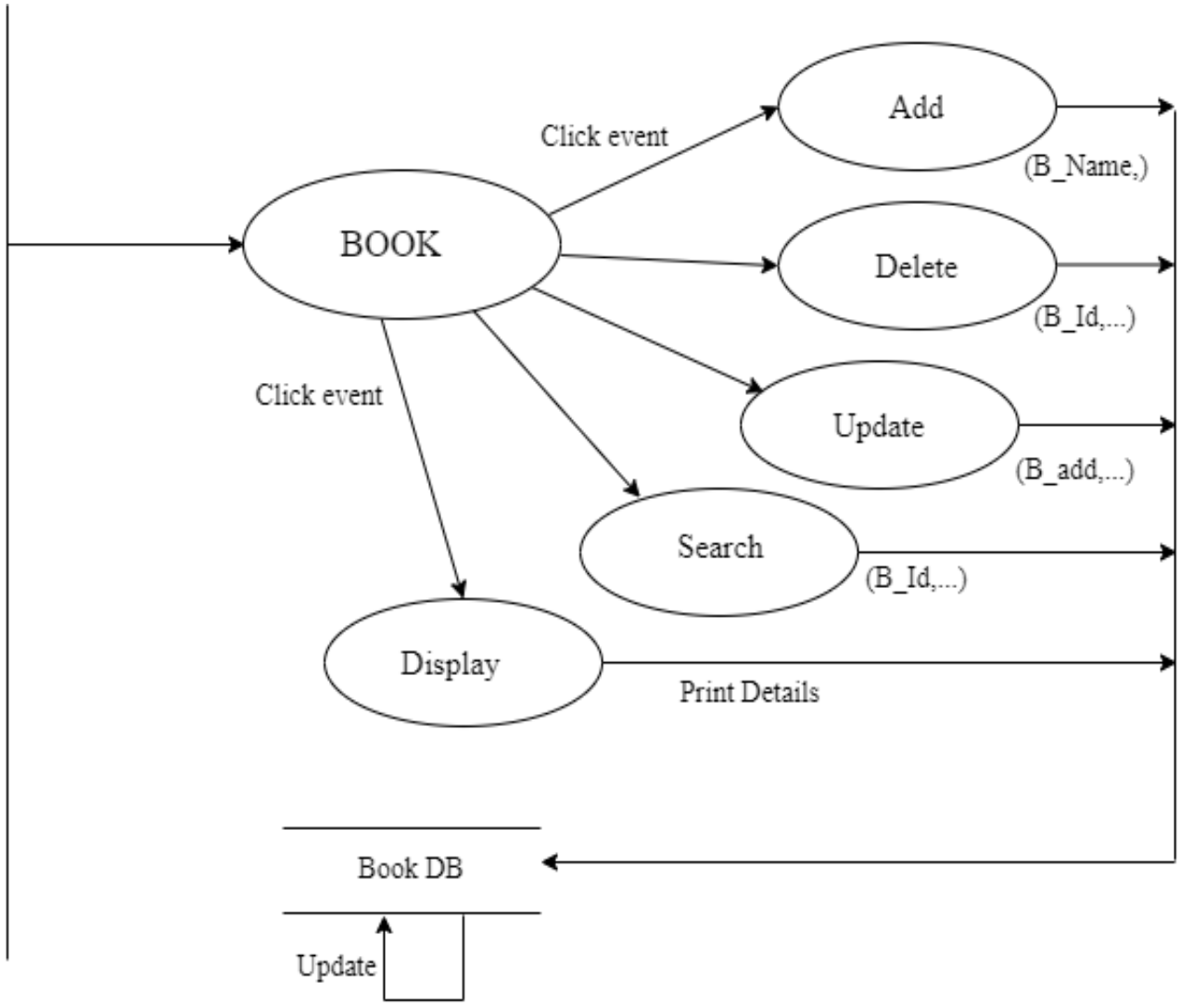
DFD Level 2(c)


Borrow
Click event
(B_Id, m_Id)
Authenticated user: Loan
LOAN
Return
(B_Id, m_Id)
Click event
Display
Print Details
Loan DB
Authenticated User: Fine
FINE
M_Id
Display
Fine DB

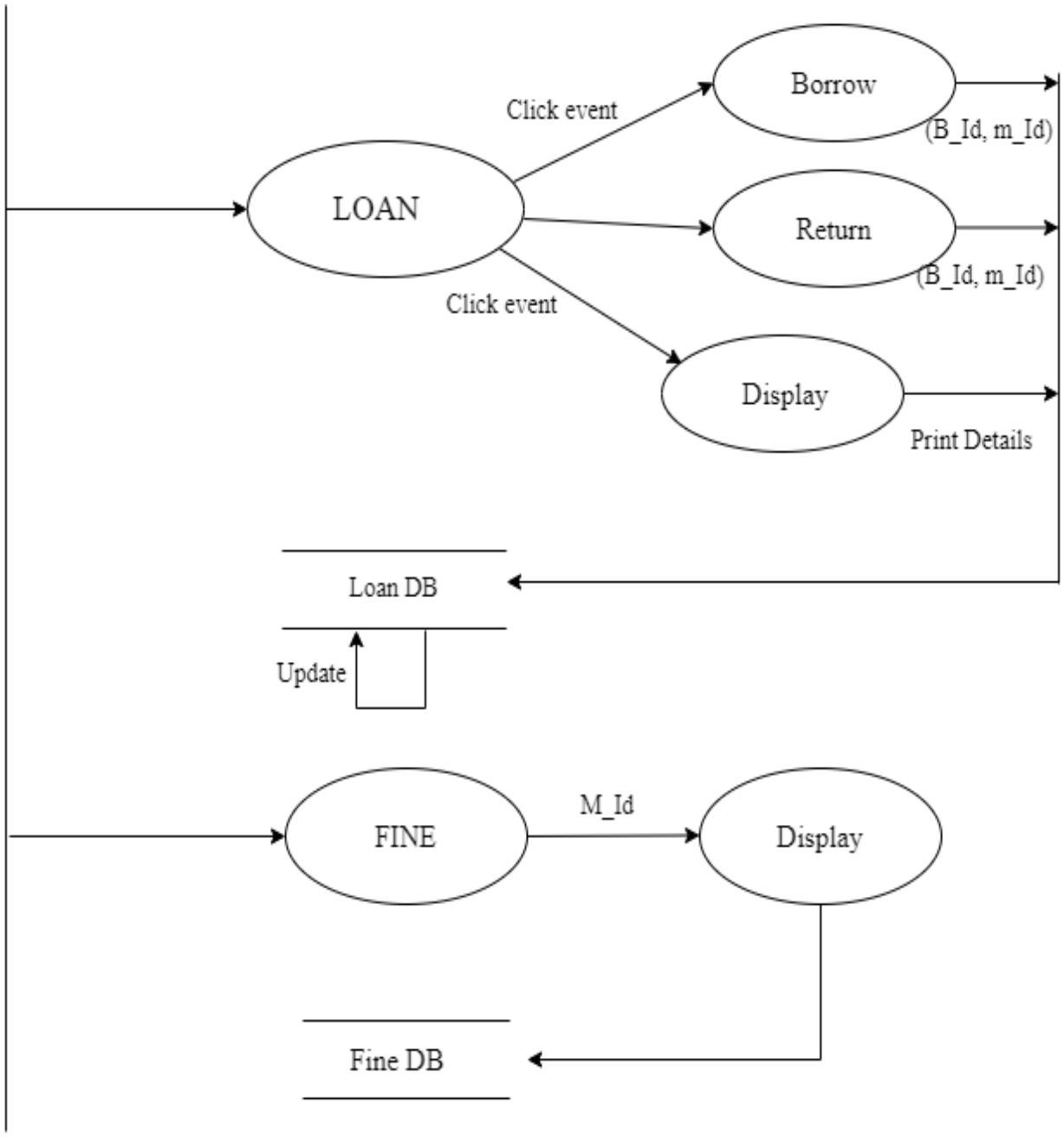
DFD Level 3(a)


Validation
LOGIN
Relogin
ADMIN(db)
Authenticated user: Member
MEMBER
Click event
Add
(M_Name, M_Id)
Delete
(M_Id,...)
Click event
Display
Print Details
Member DB
Update

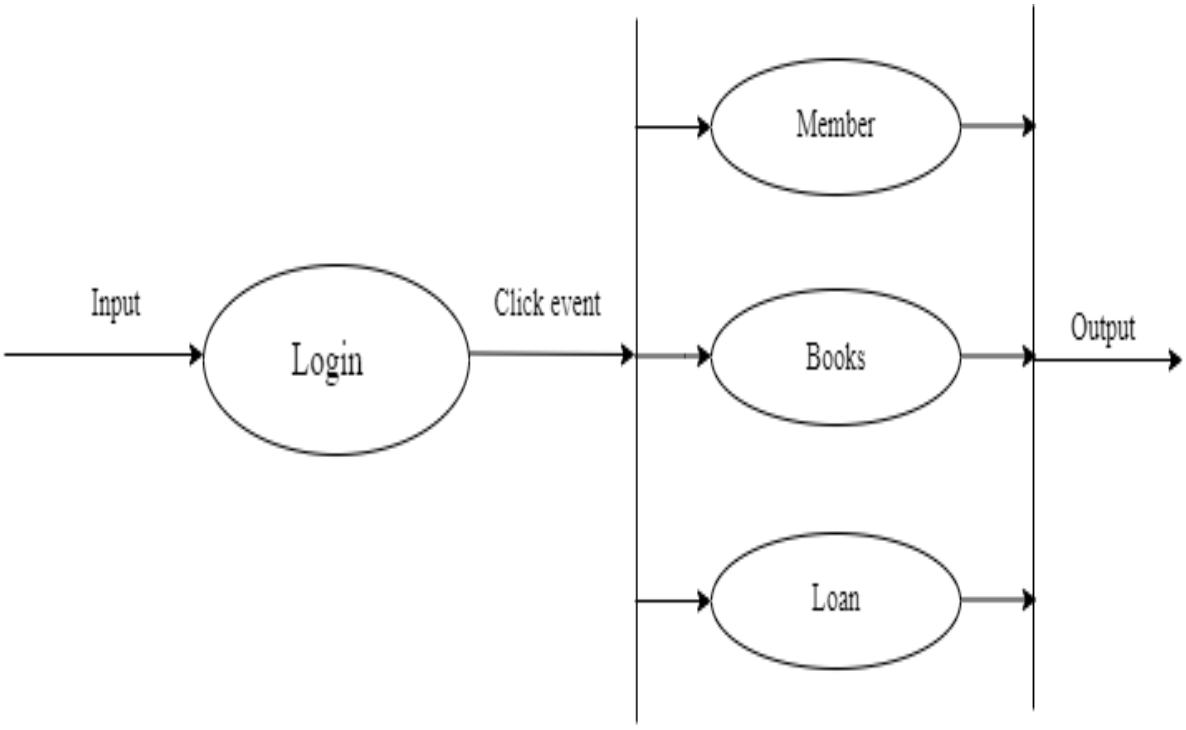
DFD Level 3(b)


Add
Click event
(B_Name,)
BOOK
Delete
(B_Id,...)
Click event
Update
(B_add,...)
Search
(B_Id,...)
Display
Print Details
Book DB
Update

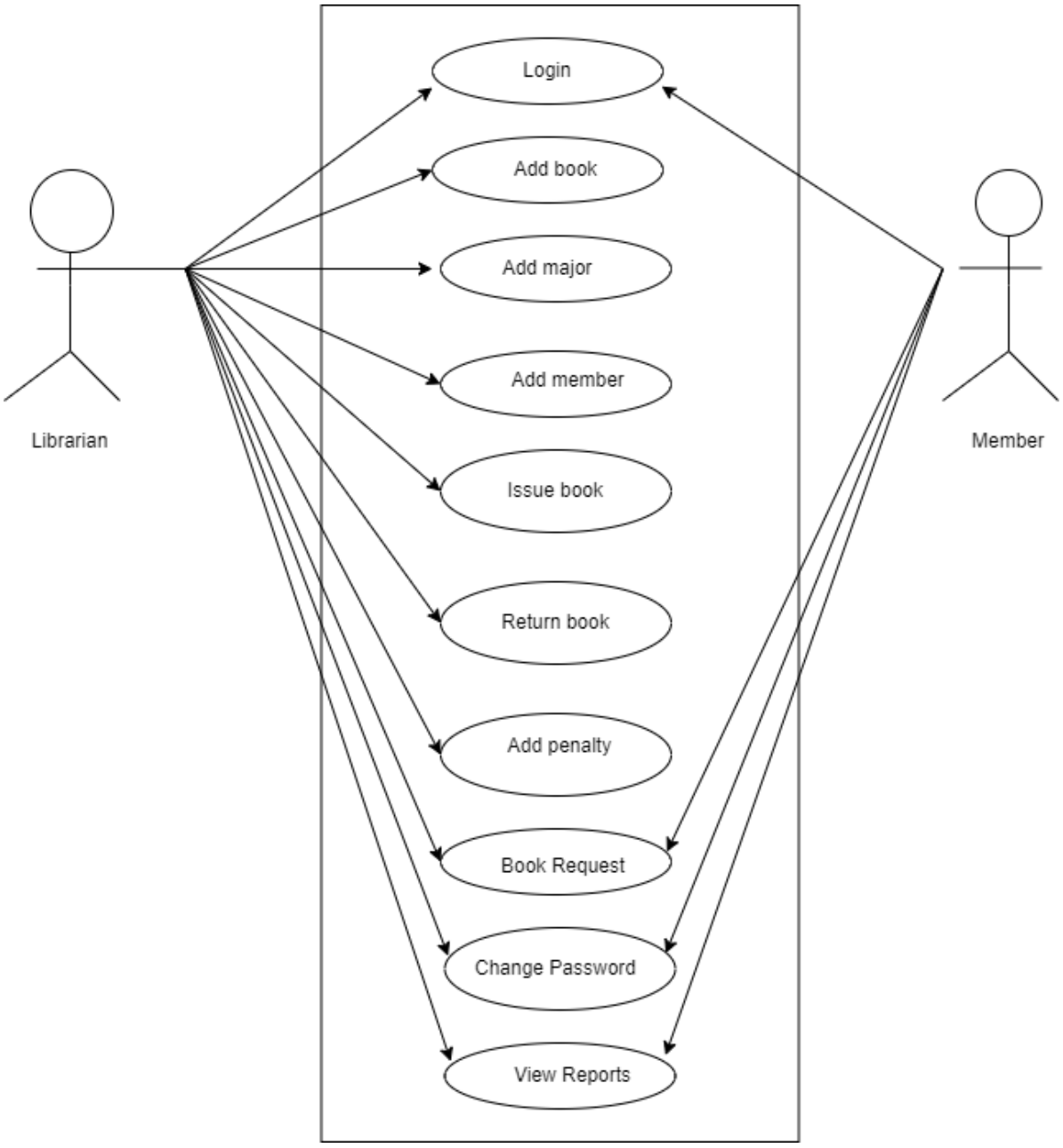
DFD Level 3(c)


Borrow
Click event
(B_Id, m_Id)
LOAN
Return
(B_Id, m_Id)
Click event
Display
Print Details
Loan DB
Update
FINE
M_Id
Display
Fine DB

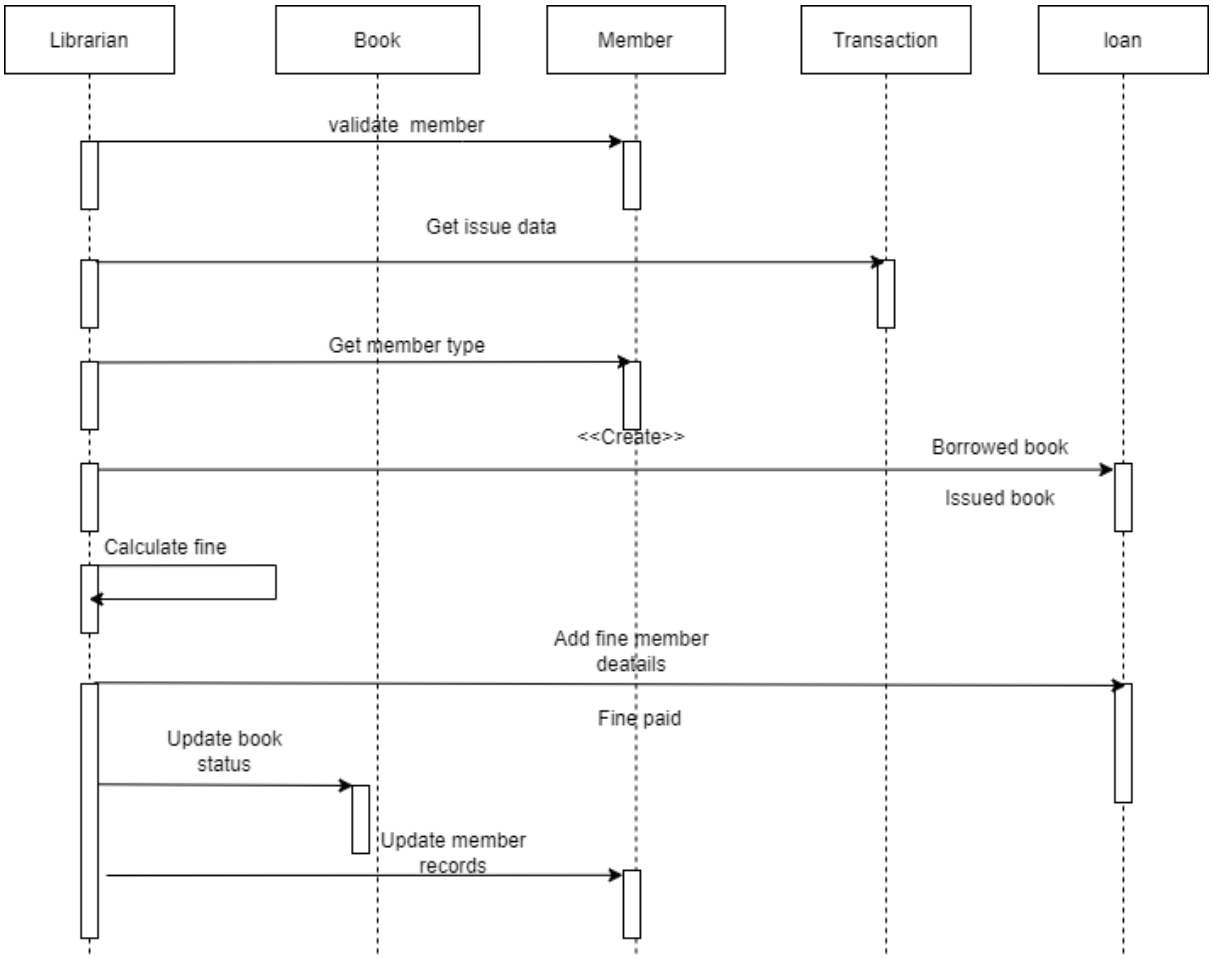
Convex Diagram



3.3) Use Case Diagram

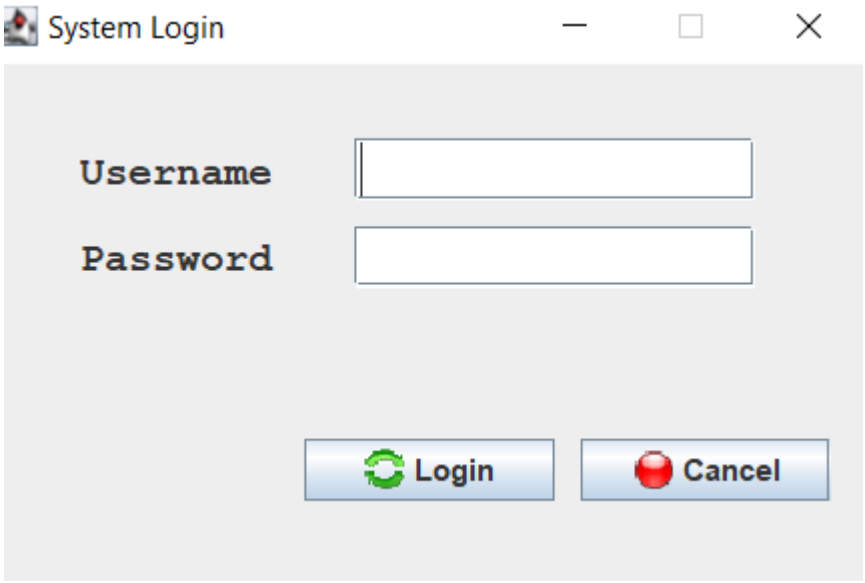


3.4) Sequence Diagram

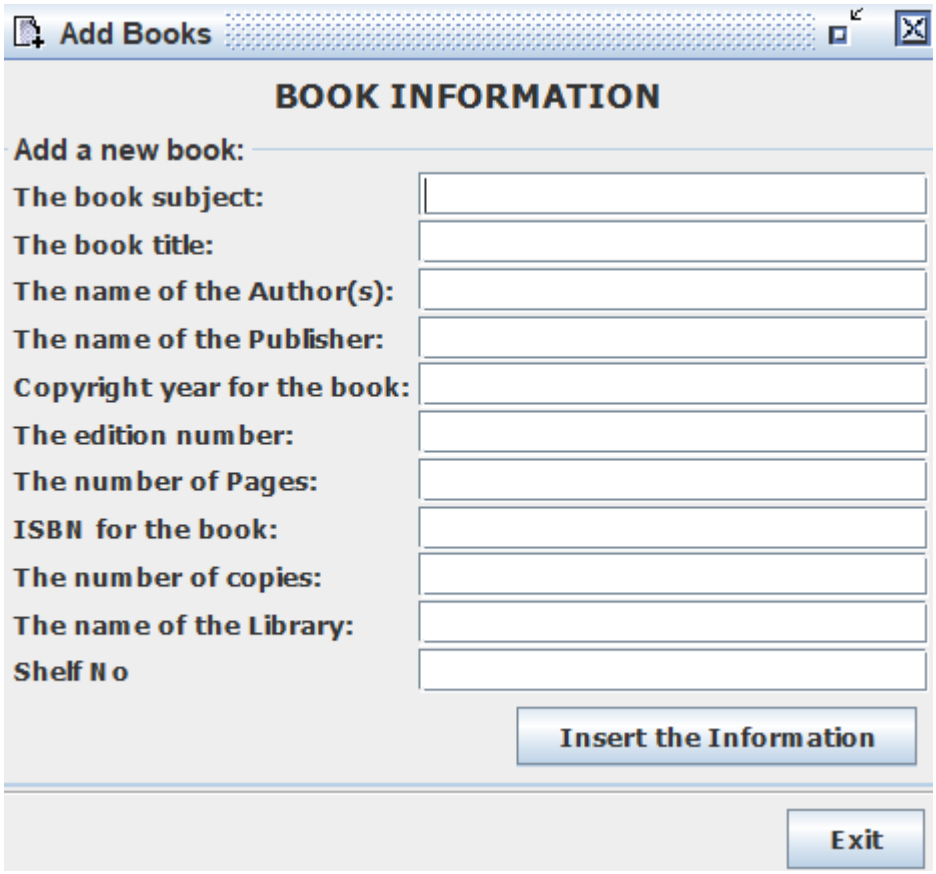


3.5) User Interface Design (screens etc)

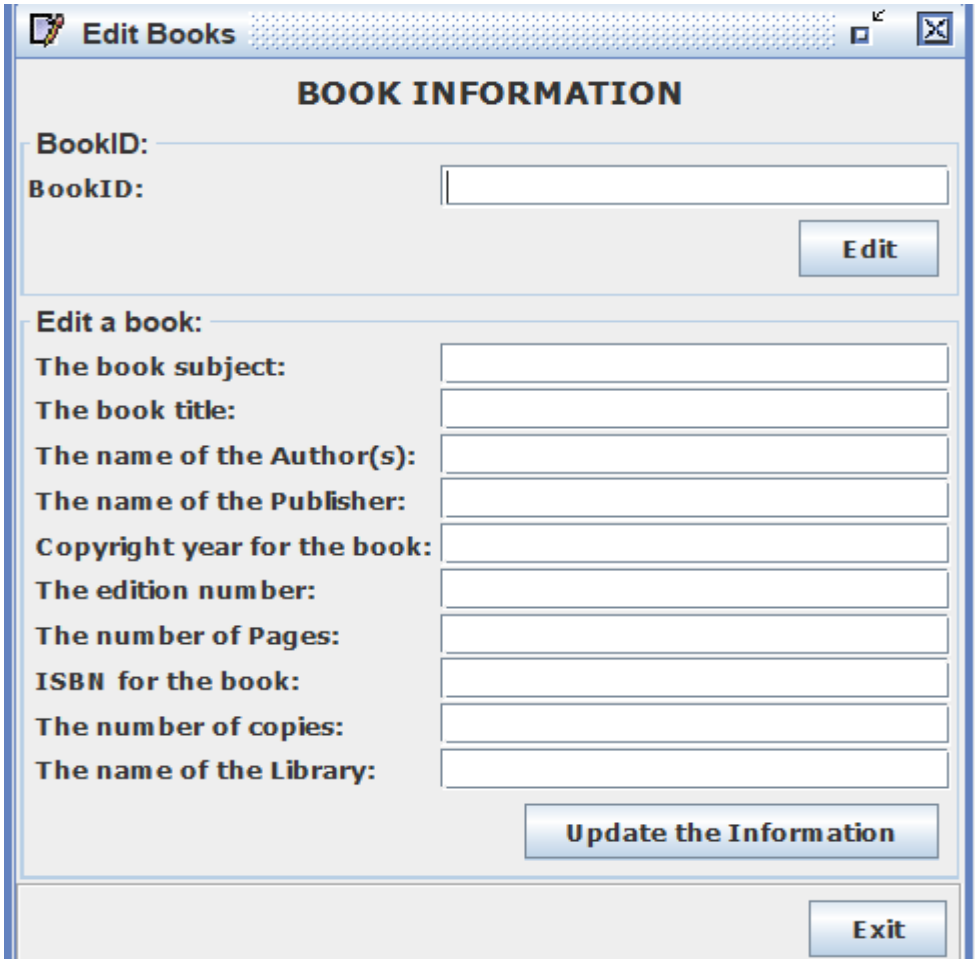
Login Page



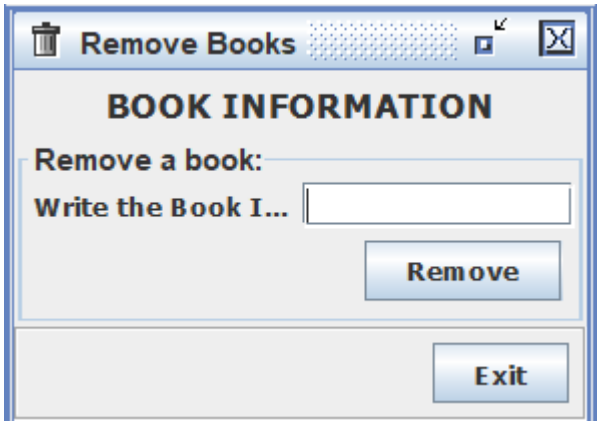
Add Books


Add Books
BOOK INFORMATION
Add a new book:
The book subject:
The book title:
The name of the Author(s):
The name of the Publisher:
Copyright year for the book:
The edition number:
The number of Pages:
ISBN for the book:
The number of copies:
The name of the Library:
Shelf No
Insert the Information
Exit

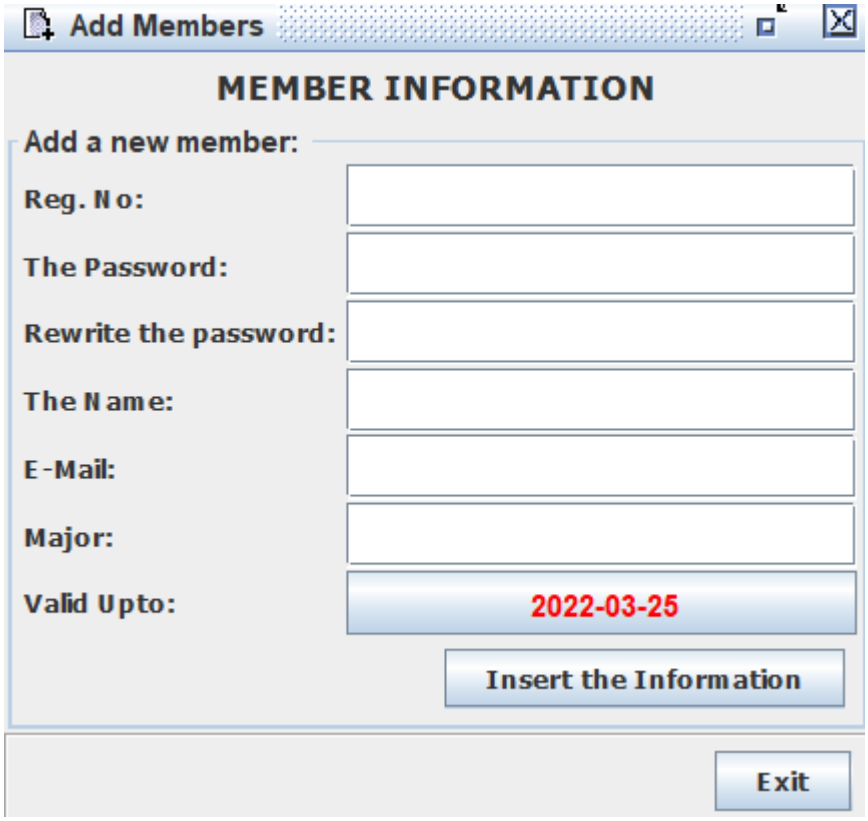
Edit Books


Edit Books
BOOK INFORMATION
BookID:
BookID:
Edit
Edit a book:
The book subject:
The book title:
The name of the Author(s):
The name of the Publisher:
Copyright year for the book:
The edition number:
The number of Pages:
ISBN for the book:
The number of copies:
The name of the Library:
Update the Information
Exit

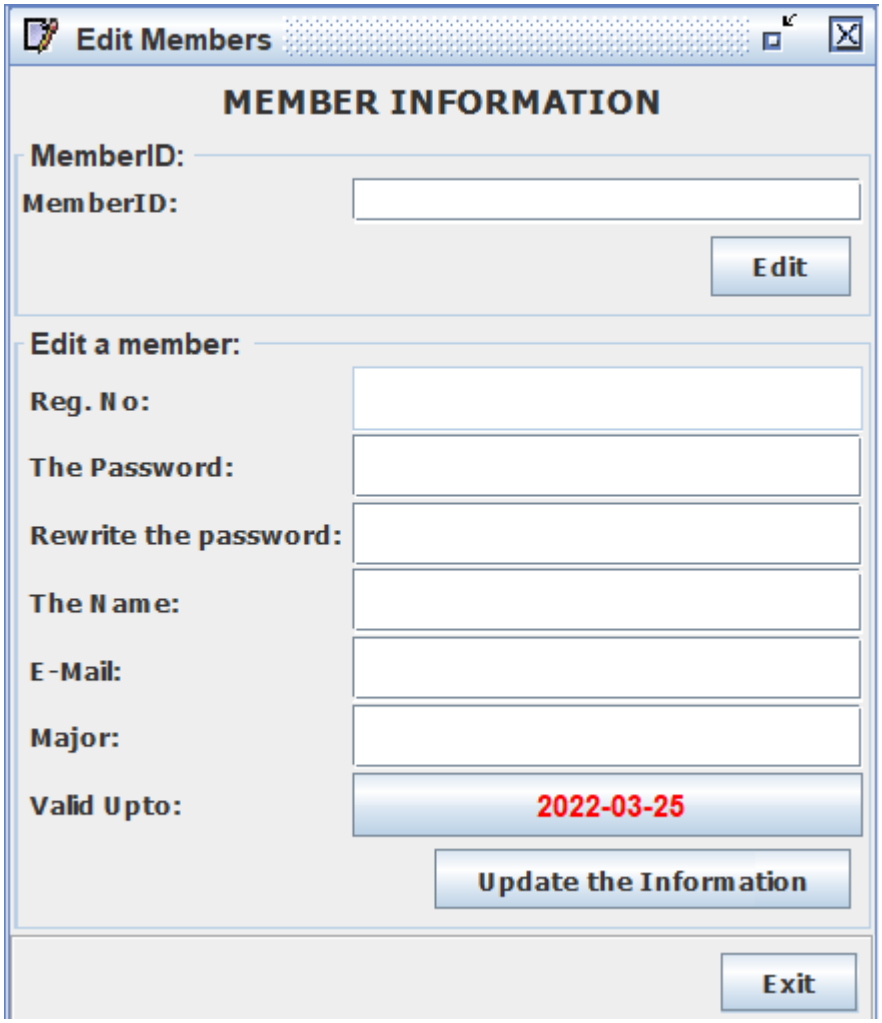
Remove Books



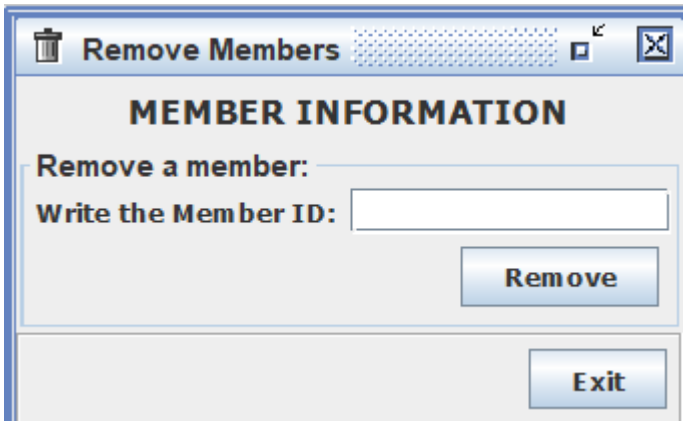
Add Members


Add Members
MEMBER INFORMATION
Add a new member:
Reg. No:
The Password:
Rewrite the password:
The Name:
E-Mail:
Major:
Valid Upto:
2022-03-25
Insert the Information
Exit

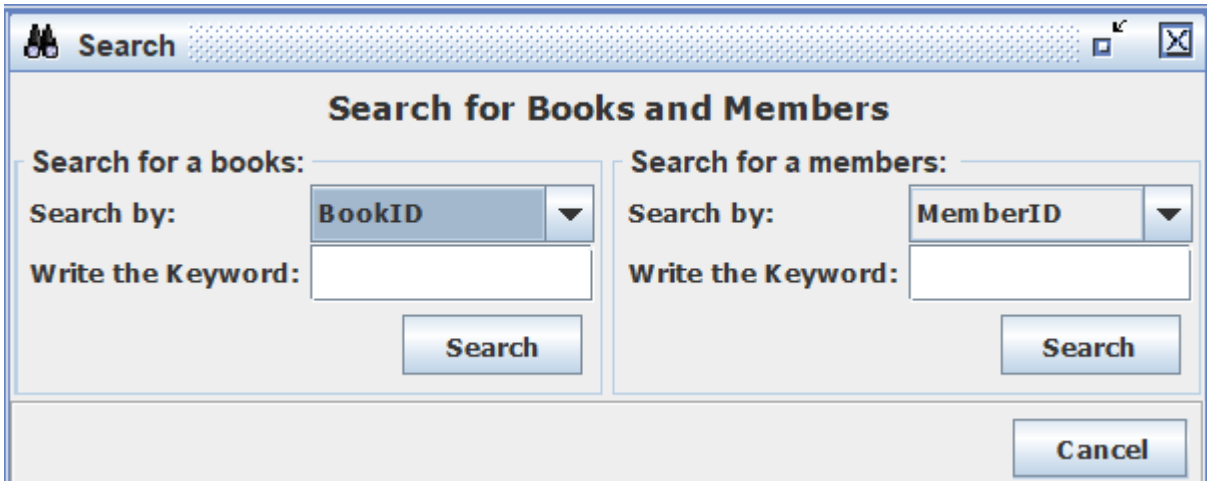
Edit Members



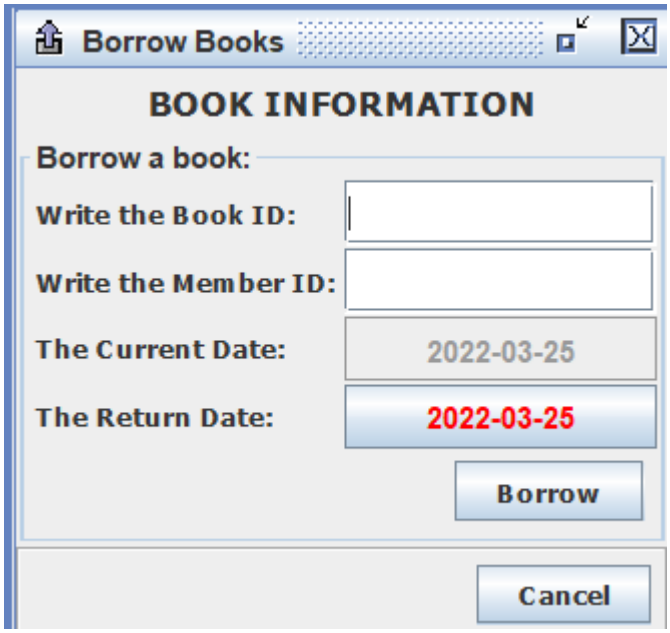
Remove Members



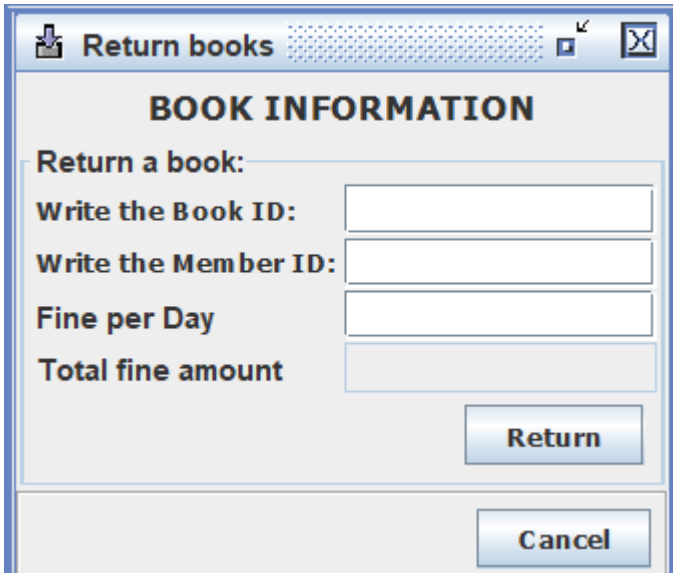
Search For Books and Members



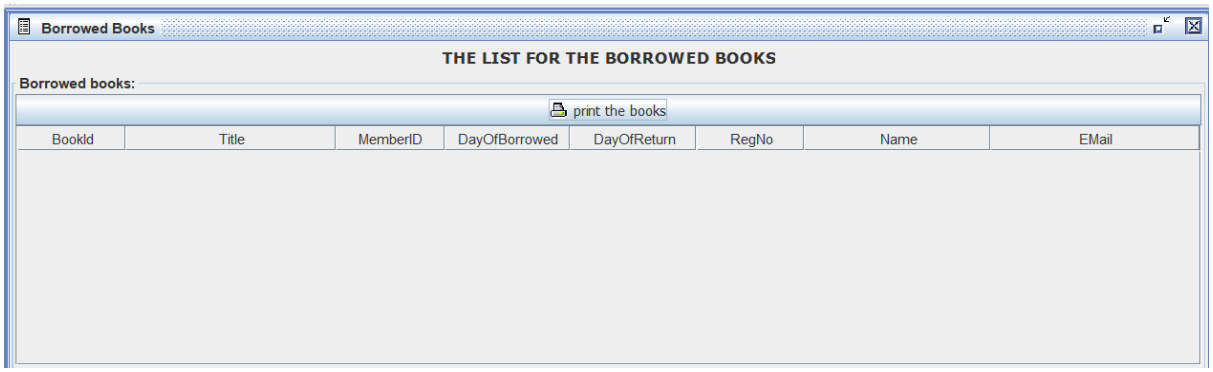
Borrow Books



Return Books



List Borrowed Books



3.6)Data Dictionary

Login:

Field Name	DataType	Size	Constraints
Username	Varchar	20	Primary key
Password	varchar	20	Not Null

Table Name:

Member:

Field Name	Data Type	Size	Constraints
MEM_ID	INTEGER	20	Primary Key
MEM_NAME	VARCHAR	50	Not Null
MEM_TYPE	VARCHAR	30	Not Null
MEM_MAJOR	VARCHAR	20	Not Null

Table Name:

Books:

Field Name	Data Type	Size	Constraints
BOOK_ID	INTEGER	20	Primary key
BOOK NAME	VARCHAR	50	Not Null
BOOK_PRICE	VARCHAR	50	Not Null
BOOK_TYPE	VARCHAR	30	Not Null
BOOK_QTY	INTEGER	10	Not Null
ISBN_NO.	VARCHAR	50	Not Null
BOOK_VOL	VARCHAR	10	Not Null
BOOK_PUB	VARCHAR	50	Not Null
BOOK_LANG	VARCHAR	50	Not Null
EDITOR	VARCHAR	20	Not Null

Table Name:

Loan:

Field Name	Data Type	Size	Constraints
M_Id	Integer	20	Primary key
Book_Id	Integer	20	Primary key
Issue_date	Varchar	10	Not null
Return_date	Varchar	10	Not null

Table Name:

Fine:

Field Name	Data Type	Size	Constraints
F_ID	INTEGER	20	Primary key
MEM_NAME	VARCHAR	50	Not null
BOOK_NAME	VARCHAR	50	Not null
F_AMT	INTEGER	30	Not null
F_PAY_DATE	INTEGER	30	Not null
ISSUE_DATE	INTEGER	30	Not null

3.7) Test Procedures and Implementation

Test Procedure –

The software testing is the critical element of software quality assurance and represents the ultimate review of the software design and coding. The main objective of the testing is to find an error and to uncover the errors that are not yet discovered.

The increasing visibility of software as a system element and the attendant cost associated with a software failure and motivating forces for well planned, through testing. It is no unusual for a software development organization to expand between 30% to 40% of project effort on testing. In the extreme, testing of human related software can cost 3-5 time as much as all other software engineering activities combined. the testing phase involves the testing of the system using various test data, preparation of the test data plays a vital role in the system testing after preparing the test data, error where found and corrected by using the following the testing steps and correction are recorded for future reference. Thus a series of testing is performed on the system before it is ready for implementation.

After completion of system analysis, design and coding through testing of the system was carried out in a systematic approach, the main objectives of the system are

➢ To ensure that the operations of the system will perform as per the specification.

➢ To make sure that the system meets the user requirement during the operations.

➢ To cross check the when correct input are filled into the system output are correct.

➢ To make sure that during the operation incorrect inputs and the outputs will be detected.

In testing process the number of strategies have been used as mentioned below

• Unit Testing

• Integration Testing

• Validation Testing

• Black Box Testing • User acceptance Testing

Unit Testing

Unit testing focuses verification efforts on the smallest unit of the software design. Using the system test plan, prepare in the design phase of the system development as guide, important control path are tested to uncover error within boundary of the module. The interface of each of the module was tested to ensure proper flow of information into and out of the module under consideration. Each module will be tested individually so as to make the individual component error free. Also other attached modules will be error free.

Integration Testing

Each module will be tested of its effect on other module by integrating the modules. This will remove further errors from the system and may also result in some changes in the individual module.

Validation Testing

At the culmination of the integration testing the software was completely assembled as package, interfaces have been uncovered, and a final series of software validation testing began. Here we test the system function manner that can be reasonably by the customer ,the system was tested against system requirement specification.

Black Box Testing

After performing validation testing, the next phase is output test of the system, since no system code is useful if it does not produce the desired output in desired format. By considering the format of the report/output, report/output is generated or displayed and tested.

User Acceptance Testing

User acceptance testing is used to determine the whether the software is fit for the user to use. The System under consideration was listed for user acceptance by keeping constant touch with the prospective user of the system at the time of design, development and making change whenever required.

USER MANUAL

4.1 User Manual

This manual contains information how to operate Digital Facilitator Distributor system in application where the library members can handle basic functions.

A librarian has access to functionalities of adding books and students, issue and return of books and list of issued and returned books.

1- Librarian /Admin :

Librarian will have the full authority of the software.

Admin will login by using his account.

Admin will view/edit the details.

2- Members / Students :

Members / Students can borrow a book and return a book

4.2 Operational Manual / Menu Manual

1- Login

Login is the very first form when you start debugging. Librarian required to login by usernsme and password. The system allows access to system if they are valid.

2- Add Book Form

Using this form librarian can insert new book in book table. System validates all required fields and insert a book record if they are valid.

3- Edit Book Form

This page allows the librarian to edit existing. Search the book before edit book function. System validate all inputs and edit the book detail if valid.

4- Search Book Form

Using this form members can search books by title or author name by providing keyword to search.

5- Return Book

Book must be issued for a student in order to return it. On return, system checks overdue and calculates and updates fine for student.

4.3) Reports

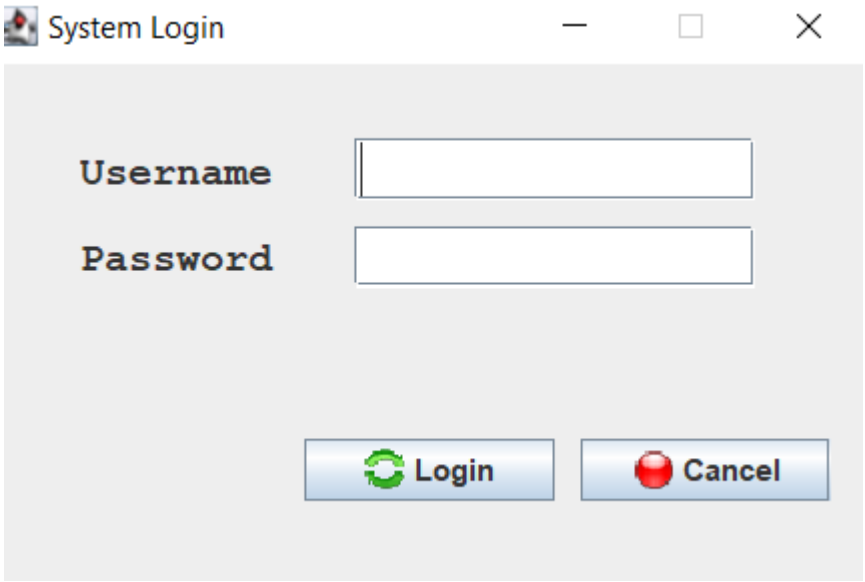
Generate Report

The REPORT contains information about books details, members details, return book details etc.

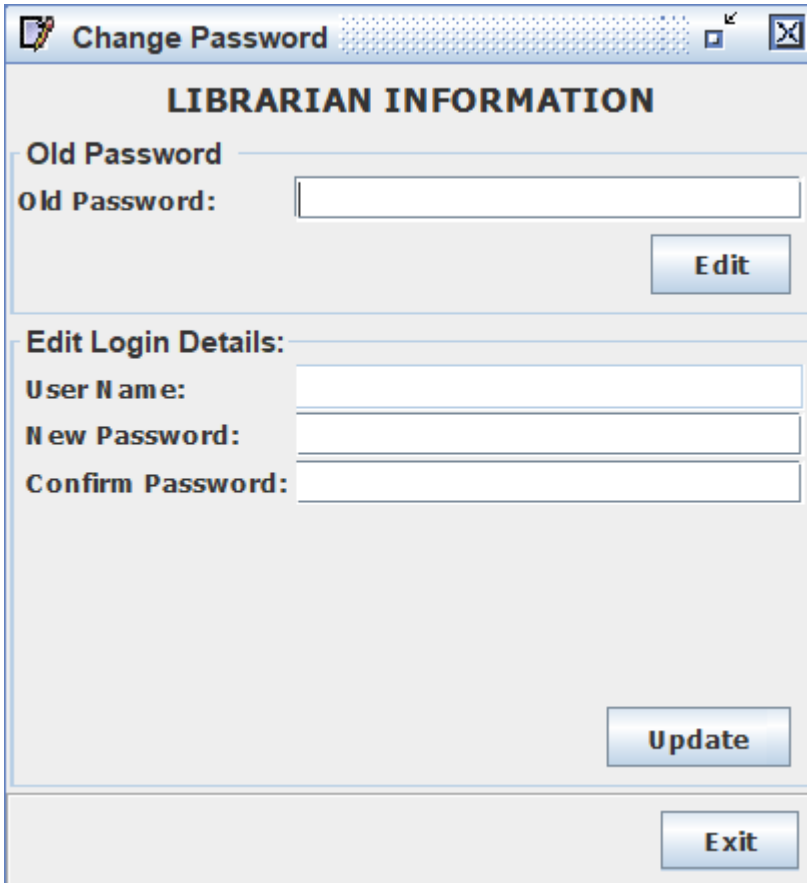
ANNEXURES

5.1) USER INTERFACE SCREEN

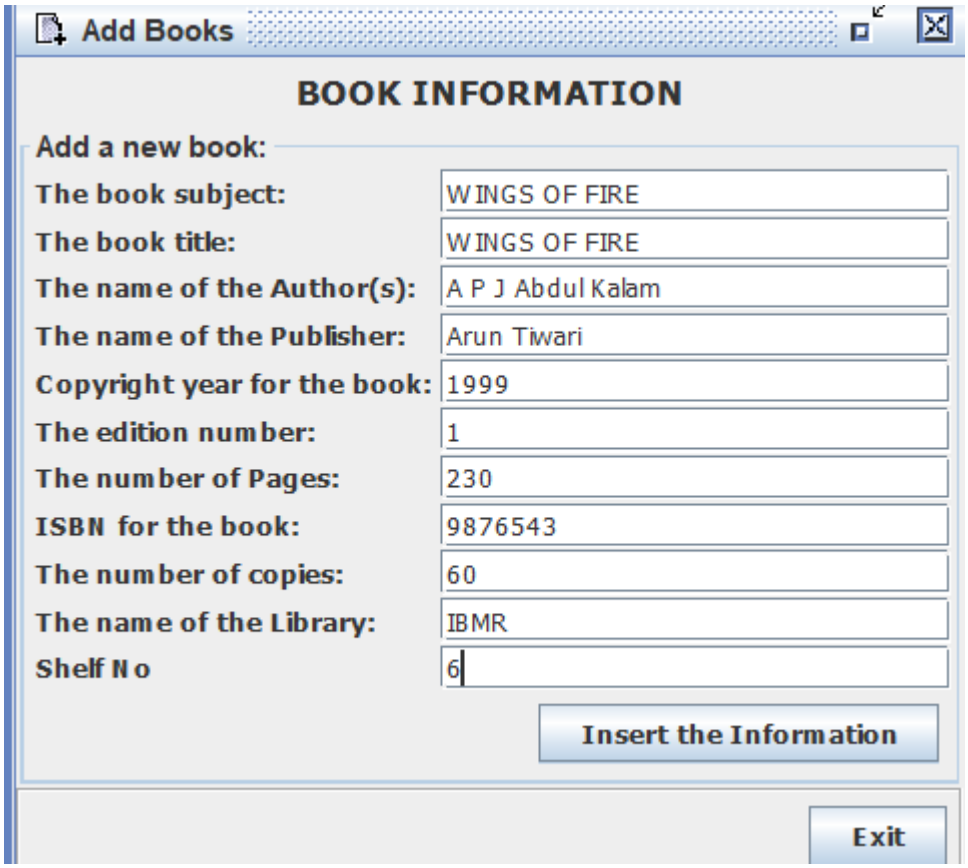
Admin Login

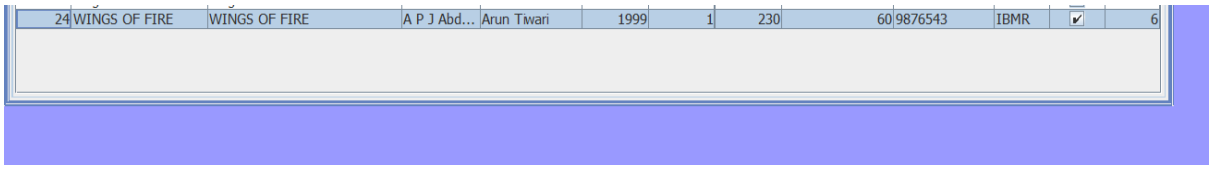


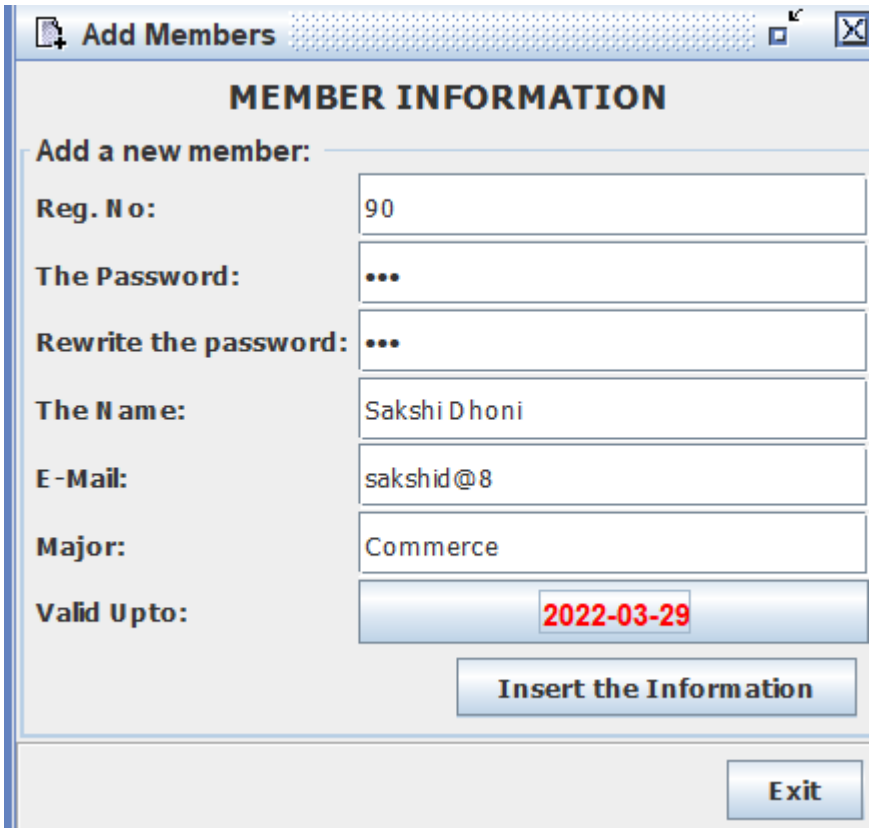
Change Password

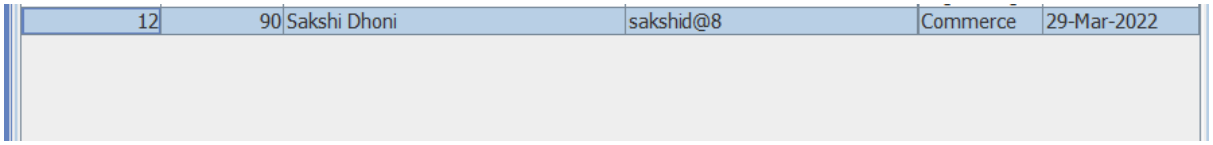


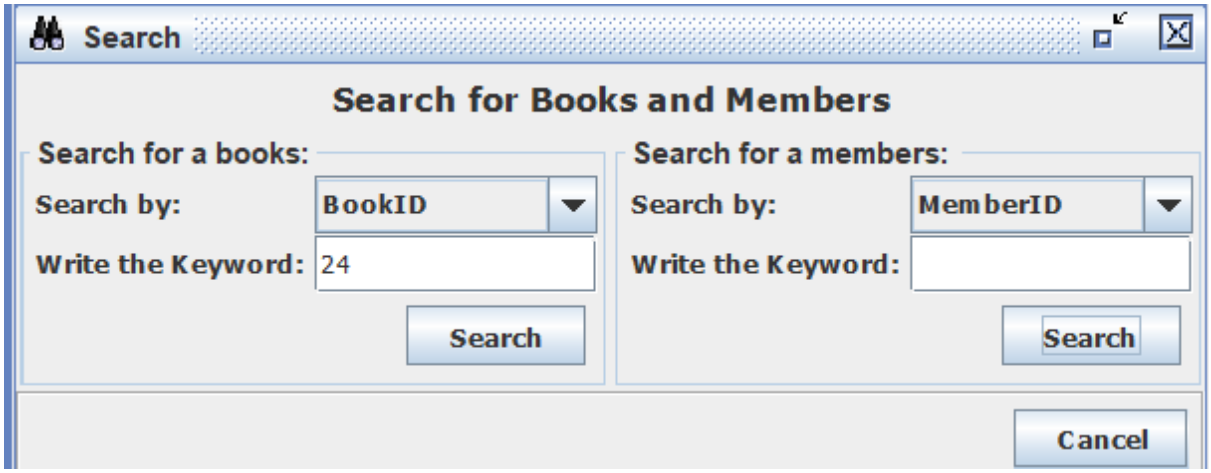
5.2) OUTPUT REPORTS WITH DATA

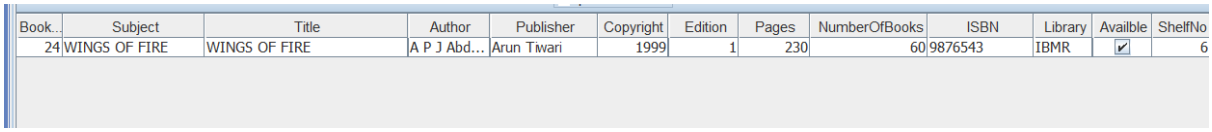





Add Members
MEMBER INFORMATION
Add a new member:
Reg. No:
90
The Password:
Rewrite the password:
The Name:
Sakshi Dhoni
E-Mail:
sakshid@8
Major:
Commerce
Valid Upto:
2022-03-29
Insert the Information
Exit


12
90
Sakshi Dhoni
sakshid@8
Commerce
29-Mar-2022





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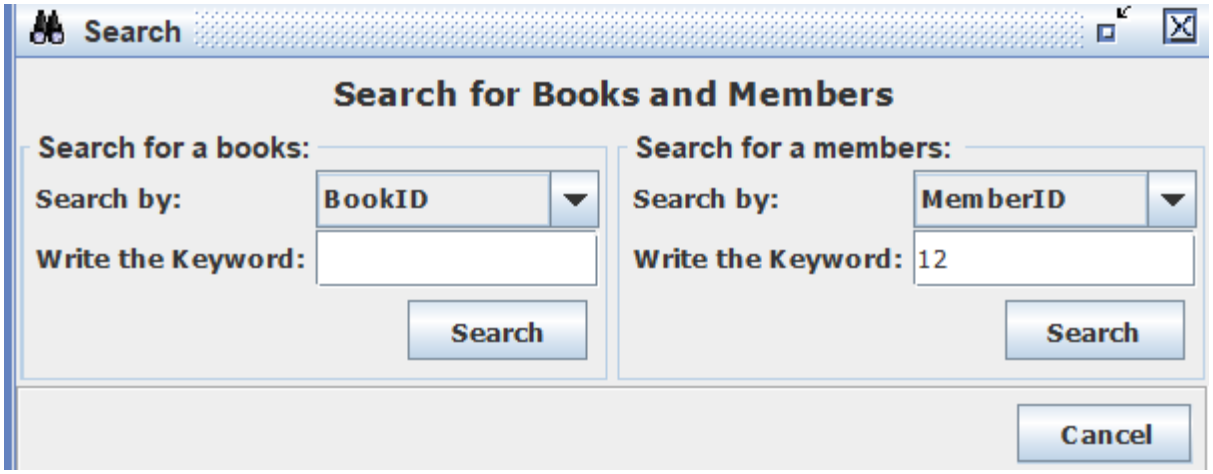
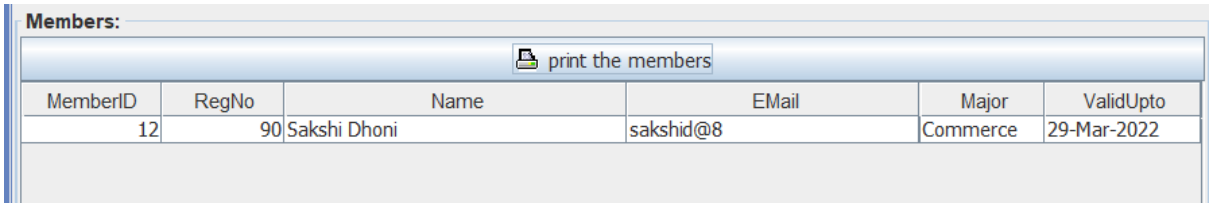

Search
Search for Books and Members
Search for a books:
Search by:
BookID
Write the Keyword:
Search
Search for a members:
Search by:
MemberID
Write the Keyword:
12
Search
Cancel


Members:
print the members
MemberID
RegNo
Name
EMail
Major
ValidUpto
12
90
Sakshi Dhoni
sakshid@8
Commerce
29-Mar-2022

5.3) SAMPLE PROGRAM CODE

```
import java.awt.EventQueue;

public class Main implements Runnable {
    final Frame frame;
    public Main(Frame frame) {
        this.frame = frame;
    }
    public void run() {
        frame.setVisible(true);
    }
public static void main(String[] args) {
        JDialog.setDefaultLookAndFeelDecorated(true);
        // Throw a nice little title page up on the screen first
        new Splash().showSplash(1000);
        //EventQueue.invokeLater(new Main(new JLibrary()));
        EventQueue.invokeLater(new Main(new LoginScreen()));
    }
}
```

```java
import java.sql.*;

public class Members {
    /*****************************************************************************
     ***      declaration of the private variables used in the program       ***
     *****************************************************************************/

    private Connection connection = null;
    private Statement statement = null;
    private ResultSet resultSet = null;

    private int memberID;
    private int regNo;
    private String password;
    private String name;
    private String email;
    private String major;
    private int numberOfBooks;
    //private int mony;
    private Date validUpto;
    //private String URL = "jdbc:odbc:JLibrary";
    private static final String DATABASE_URL = "jdbc:mysql://localhost:3306/Library";
    private static final String USER_NAME="root";
    private static final String PASSWORD="";
    public Members() {
    }
    /*public Members(int memberID, int ID, String password, String name, String email, String major, int numberOfBooks, int mony, Date expired) {
        this.memberID = memberID;
        this.ID = ID;
        this.password = password;
        this.name = name;
        this.email = email;
        this.major = major;
        this.numberOfBooks = numberOfBooks;
        this.mony = mony;
        this.expired = expired;
    }*/

    public int getMemberID() {
        return memberID;
    }
```

DRAWBACK AND LIMITATIONS

More Man power

Lack Of Security Of Data

Time Consuming

PROPOSED ENHANCEMENTS

Current system is designed in short amount of time so all functionality are not included in the system. More functionality can be included in the system in feature to help user of the system.

CONCLUSION

This system provides a computerized version of digital facilitator distributor system which will benefit the students.

It makes entire process easy where student can search books librarian can generate reports and do book transactions.

This software takes care of all the requirements of an a library and is capable to provide easy and effective storage of information related to books and users.

CHAPTER 9 – BIBILIOGRAPHY

Following books were helpful to us in building and understandingthe concepts. Also these books proved to be great importance during the actual development i.e. Design & coding of the system.

1 – [HER 10]Herbert Schildt “The complete Reference Java”Tata McGraw hill, New Delhi,2010

Websites :

www.google.co.in

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